

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number
WO 2004/030059 A1

(51) International Patent Classification⁷: H01L 21/205

(21) International Application Number:
PCT/KR2003/001915

(22) International Filing Date:
19 September 2003 (19.09.2003)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2002-0059372
30 September 2002 (30.09.2002) KR

(71) Applicant (for all designated States except US): EU-
GENE TECHNOLOGY CO., LTD. [KR/KR]; 4-3,
Chaam-Dong, 330-200 Cheonan, Chungcheongnam-Do
(KR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): UM, Pyung-Yong
[KR/CA]; #61, 18707, 65 Ave, Surrey, British Columbia
V3S 9H2 (CA).

(74) Agent: JO, Chi-Hoon; 5th Fl., Ewha Bldg 736-18 Yok-
sam-dong, Kangnam-gu, Seoul 135-924 (KR).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

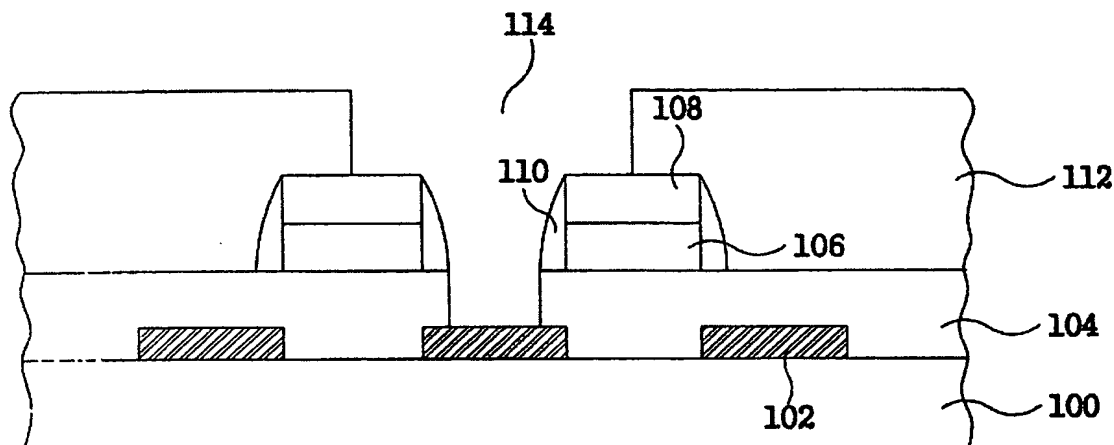
(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR DEPOSITING NITRIDE FILM USING CHEMICAL VAPOR DEPOSITION APPARATUS OF SIN-
GLE CHAMBER TYPE



(57) **Abstract:** The present invention relates to a method for depositing a nitride film using a chemical vapor deposition apparatus of single chamber type, and more particularly to a method for depositing a nitride film that is capable of depositing the nitride film in which an area of the nitride film at the top of an interlayer isolation film has a larger thickness compared to each area thereof at the sides and the bottom of the interlayer isolation film and/or a contact hole by regulating a mixture ratio of an ammonia gas and a silane gas, both of which being process gases, using a chemical vapor deposition apparatus of single chamber type.